What is claimed is:

1. A mobile apparatus having tactile feedback function comprising:

a data processing unit for executing data processing operation;

a signal producing unit for producing a signal having a waveform defined by resultant data of said data processing operation in said data processing unit; and

one or a plurality of haptic actuator for generating tactile pattern, which is to be communicated to a user who touches said mobile apparatus, in accordance with said signal produced in said signal producing unit, wherein

said haptic actuator comprises a bending-type actuator having a multi-layer configuration.

2. The mobile apparatus according to claim 1, further comprising a user input device for receiving data or command inputted by the user, wherein:

said data processing unit processes said inputted data or command,

said signal producing unit generates said signal in accordance with said inputted data or command in such a way that said haptic actuator gives tactile feedback in response to user's input operation.

3. The mobile apparatus according to claim 1, wherein:

said bending-type actuator comprises a plurality of piezoelectric layers, and a plurality of electrodes for applying voltage on respective piezoelectric layers.

4. The mobile apparatus according to claim 1, wherein:

said bending-type actuator has a beam portion that is fixed at one end, thereby allowing free movement of the other end of said beam portion.

5. The mobile apparatus according to claim 1, wherein:

said bending-type actuator has a beam portion that is fixed at both ends, thereby allowing movement in a middle of the beam portion.

6. The mobile apparatus according to claim 1, wherein:

said haptic actuator is placed inside said mobile apparatus.

7. The mobile apparatus according to claim 1 wherein:

said haptic actuator is attached to a movable part of said mobile apparatus.

8. The mobile apparatus according to claim 1 wherein:

said haptic actuator is attached to a movable part of said mobile apparatus and actuate said movable part.

9. The mobile apparatus according to claim 1, further comprising a plurality of said haptic actuators, wherein:

said plurality of said haptic actuators are placed inside said mobile apparatus and attached to respective movable parts of said mobile apparatus.

10. The mobile apparatus according to claim 1, further comprising a display screen for displaying a plurality of graphic objects, wherein:

said display screen includes a plurality of said haptic actuators, said haptic actuators generating tactile pattern independently and being placed under respective areas of said display screen, said graphic objects being displayed at said areas.

11. The mobile apparatus according to claim 1, wherein:

said signal producing unit sends an electric signal to said display screen.

12. The mobile apparatus according to one of claims **1** and **3-8**, wherein:

said mobile apparatus is a pen-type apparatus for inputting data to a computer apparatus, and

said pen-type apparatus comprises one or more of said haptic actuators placed therein.

13. The mobile apparatus according to claim 12, wherein:

said pen-type apparatus with said haptic actuator is used in combination with on-screen visual interface to facilitate input and operation of data in said computer apparatus.

14. A system comprising a main apparatus having a visual interface function and a data input apparatus to be used in combination with said visual interface function, said system comprising:

a data processing unit for executing data processing operation;

a signal producing unit for producing a signal having a waveform defined by resultant data of said data processing operation in said data processing unit;

one or a plurality of haptic actuator for generating tactile pattern, which is to be communicated to a user who touches said data input apparatus, in accordance with said signal produced in said signal producing unit, and

an input/output unit for visual displaying data and detecting data input performed by said data input apparatus, wherein

said haptic actuator is placed in said data input apparatus, and

said haptic actuator comprises a bending-type actuator having a multi-layer configuration.

15. The system according to claim 14, wherein:

said data input apparatus is used for selecting an element of graphical object visually displayed on said input/output unit.

16. The system according to claim 15, wherein:

said data input apparatus provides tactile feedback before operating and/or modifying selected element of graphical object.

17. The system according to claim 15, wherein:

said data input apparatus provides different tactile feedback depending on an attribute of selected element of graphical object.

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